

EXPLANATION

- PRECAMBRIAN ROCKS--Primarily granite
- FAULT--Dashed where approximately located; dotted where concealed
- BOUNDARY OF THE SWEETWATER RIVER BASIN
- APPROXIMATE BOUNDARY OF AQUIFER IN SEDIMENTARY ROCKS OF TERTIARY AGE AND ALLUVIUM OF QUATERNARY AGE
- 6000 WATER-TABLE CONTOUR--Shows altitude of water table, 1982. Dashed where approximately located. Contour interval 100 feet. Datum is sea level
- 145R 6620 WATER WELL--Number above bar is depth to water, in feet below land surface. R, reported water level. Number below bar is altitude of water table, in feet above sea level
- 6400 SPRING--Number is altitude of water table, in feet above sea level

INTRODUCTION

In the southeastern part of the Sweetwater River basin, the major aquifer consists of the upper part of the White River Formation, the Arikaree and Ogallala Formations, all of Tertiary age, and to a small extent, the alluvium of Quaternary age along the Sweetwater River. The saturated thickness of the aquifer in most of the area, but not including the alluvium, ranges from about 500 to 3,000 feet (Borchert, 1977). The maximum saturated thickness of the alluvium penetrated by test holes was 63 feet (Whitcomb and Lowry, 1968). The geology and general hydrology of the Sweetwater River basin is described in the report by Borchert (1977).

WATER-TABLE CONTOURS AND DEPTH TO WATER

The water-table contours and depths to water are based primarily on ground-water-level measurements made during 1982 in 104 wells, most of which are located south of the Sweetwater River. Land-surface altitudes of springs and water-surface altitudes along the Sweetwater River and perennial reaches of creeks flowing northward from the Green and Ferris Mountains also were used as control for mapping the water table. The perennial reaches shown on the map are assumed hydraulically connected with the water table. They were identified from streamflow gain-and-loss measurements made during April and May 1982.

SELECTED REFERENCES

Borchert, W.B., 1977, Preliminary digital model of the Arikaree aquifer in the Sweetwater River basin, central Wyoming: U.S. Geological Survey Water-Resources Investigations Open-File Report 77-107, 19 p.

Crist, M.A., and Lowry, M.E., 1972, Ground-water resources of Natrona County, Wyoming: U.S. Geological Survey Water-Supply Paper 1897, 92 p.

Love, J.D., 1970, Cenozoic geology of the Granite Mountains area, central Wyoming: U.S. Geological Survey Professional Paper 495-C, 154 p.

Lowry, M.E., Rucker, S.J., IV, and Wahl, K.L., 1973, Water resources of the Laramie, Shirley, Hanna basins and adjacent areas, southeastern Wyoming: U.S. Geological Survey Hydrologic Investigations Atlas HA-471, scale 1:250,000, 4 sheets.

U.S. Geological Survey, 1976, Hydrologic unit map--1974, State of Wyoming: Reston, Virginia, scale 1:500,000.

Whitcomb, H.A., and Lowry, M.E., 1968, Ground-water resources and geology of the Wind River basin area, central Wyoming: U.S. Geological Survey Hydrologic Investigations Atlas HA-270, 13 p., scale 1:250,000, 3 sheets.

CONVERSION FACTORS AND VERTICAL DATUM

For use of readers who prefer to use International System (SI) units, rather than the inch-pound terms used in this report, the following conversion factors may be used:

Multiply inch-pound unit	By	To obtain SI unit
foot	0.3048	meter
mile	1.609	kilometer

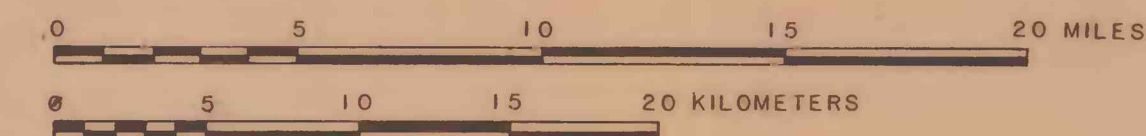
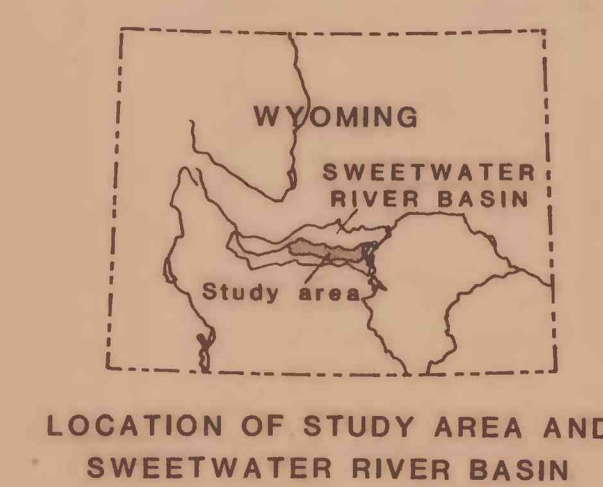
Sea level: In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "Mean Sea Level of 1929."

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Copies of this map can be purchased from:

U.S. Geological Survey
Books and Open-File Reports
Federal Center
Box 25425
Denver, Colorado 80225



Base from U.S. Geological Survey 1:250,000 quadrangles: Casper (1955) and Lander (1955)

WATER-TABLE CONTOURS AND DEPTH TO WATER IN THE SOUTHEASTERN PART OF THE SWEETWATER RIVER BASIN, CENTRAL WYOMING, 1982

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Geology modified from Whitcomb and Lowry (1968), Crist and Lowry (1972), and Lowry and others (1973). Boundary of Sweetwater River basin from U.S. Geological Survey (1976)